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ABSTRACT

Following an outline of education, particularly secondary education, the French system of tertiary education is described. The orientation of studies offered in the three two-year cycles of study is described. The differences between the national institutes and the universities are explained. The remainder of the report contains admission procedures, enrollment figures, financial aid to students, research in tertiary education, cost of tertiary education, permanent education (workers right to training leave), and reform projects. (SPG)

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Working Party on the
Diversification of Tertiary Education

Strasbourg 1-3 March 1978

DIVERSIFICATION OF TERTIARY EDUCATION IN FRANCE

REPORT

by Professor Paul DIDIER
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DIVERSIFICATION OF TERTIARY EDUCATION IN FRANCE

Chapter 1: The structure of the system

Section 1: Secondary education

For 20 years French secondary education has been subjected to a continuous process of reform or reorganisation, the provisional close of which is marked by the Act of 11 July 1975.

As things stand at present, school education is compulsory between the ages of 6 and 16. It falls into two stages (preceded by an optional nursery school stage), namely:

- primary school, from 6 to 11;
- secondary school, from 11 to 16 and over.

Secondary education itself falls into two study cycles:

- a first cycle, lasting 4 years and providing basic education, which as far as possible is the same for everyone;
- a second cycle, which can be either a long one (based on general culture and either diversified or with a vocational bias), lasting 3 years, or a short one of 2 years, providing occupation-oriented technical training.

1.1 Secondary education - first cycle

All pupils completing the 2nd year of the intermediate course are distributed without distinction among the various divisions of the sixth class. The first cycle of secondary education provided in lower secondary schools ("collèges", which have taken the place of the former "collèges d'enseignement secondaire" and "collèges d'enseignement général" lasts 4 years, from the sixth to the third class, corresponding to the sixth, seventh, eighth and ninth years of schooling.

This stage is divided into a first period of 2 years known as the "observation cycle" (sixth and fifth classes), in which all pupils receive the same teaching, and a second 2-year period, the "orientation cycle" (fourth and third classes), which includes some teaching common to all pupils and diversified teaching in the form of options freely selected by families. A certificate (the "brevet des collèges") may be obtained at the end of the period.

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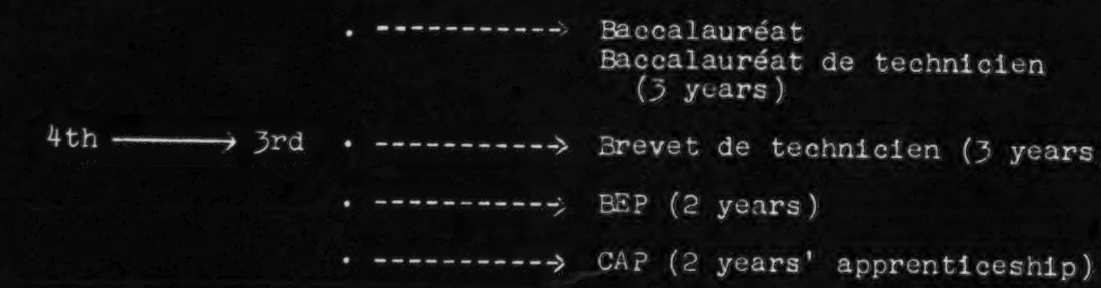
1.1.1 Observation cycle

	Number of pupils	Length of classes	Hours per week	Transition to higher class
sixth class	24 - 30	50 - 55 minutes	24	automatic; year repeated at family's request
fifth class	"	"	24 (to which may be added hours for catching up, additional learning or optional activities)	Options chosen by the family for orientation of pupil; if repetition is suggested by the class council, family is entitled to appeal.

1.1.2 Orientation cycle

This cycle covers the fourth and third classes in lower secondary schools. At the end of the fifth class a pupil may, according to his results, choice, opportunities and orientation, move on to one of the groups of fourth and third classes listed below or to a group oriented towards technical and vocational education.

A. Fourth and third classes lead to:
either a long course of general education and the "baccalauréat" or a long course of technical education (for the "baccalauréat de technicien" and "brevet de technicien") or a short course of technical education ("Brevet d'Etudes Professionnelles" or BEP, and "Certificat d'Aptitude Professionnelle", or CAP).



The weekly quota for these classes is 26 hours, not counting optional subjects.

B. There are special 4th and 3rd classes for pupils leaving the fifth class who are having difficulties in their schooling; these classes enable them to complete the first cycle of secondary education whilst preparing for a particular orientation. The weekly total in this case is 30 hours.

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C. There are alternative types of class. still on the same level, which prepare pupils directly or indirectly for the CAP or for vocational training in apprenticeship.

At the end of the third class, a choice of orientation is made, at the request of the family, after discussion by the class council.

At the end of the first cycle of secondary education pupils have completed their basic education and the third class marks the departure point for the long or short second cycle or for specialist training by means of apprenticeships and vocational courses.

1.2 Secondary education - second cycle

1.2.1 Short course

This two-year course is given in the lower secondary schools, technical colleges ("lycées d'enseignement professionnel", formerly "collèges d'enseignement technique") or in establishments run by the Ministry of Agriculture (for farming courses). It provides technical training specifically designed for a particular occupation.

The course leads to the following qualifications:

A. The professional education certificate ("Certificat d'Education Professionnelle" or "CEP");

B. The "Brevet d'Etudes Professionnelles" (BEP).

The course lasts for 2 years and contains a greater proportion of technical theory for pupils who have completed the first cycle of secondary school. The best pupils who have passed the "CEP" may consider entering a transitional first class, with a view to preparing for the "brevet de technicien" (BT) or the "baccalauréat de technicien" (BTn).

C. The "certificat d'aptitude professionnelle" (CAP).

1.2.2 Long course

This aims at providing either a general type of education (classical, modern or technical) or vocational education leading to qualifications as technical operators and technicians.

The establishments where these courses are given are known as "lycées" (classical, modern or technical).

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This type of secondary education includes:

- general education, leading to the secondary school "baccalauréat";

- vocational education, leading to a "baccalauréat de technicien" or "brevet de technicien".

The long second cycle mainly covers three classes: second, first and terminal, corresponding respectively to the tenth, eleventh and twelfth years of study. Pupils are generally in the 15-18 age bracket.

2nd class: this includes several sections channelling pupils to differently oriented terminal classes which lead to whichever "baccalauréat" is appropriate for the section.

A. Arts section (classics or modern languages with a bias towards economic and social sciences).

2nd A ---→1st and Terminal A ----→ Baccalauréat A, philosophy - literature

2nd AB --→1st and Terminal B ----→ Baccalauréat B, economics and social sciences

---→1st and Terminal G ----→ Baccalauréat G, technical economics

B. Science section (mathematical and physical sciences)

. 1st and Terminal C ---→ Baccalauréat C, maths and physical sciences

2nd C ---→. 1st and Terminal D ---→ Baccalauréat D, maths and natural sciences

. 1st and Terminal H ---→ Baccalauréat H, data processing

2nd D ---→. 1st and Terminal D ---→ Baccalauréat D, agronomy (farming) and technology

C. Industry and technology section T (basic industrial science and technology)

. Baccalauréat de technicien H

2nd T ---→. Baccalauréat mathématiques et techniques E

. Baccalauréat de technicien F

In order to maintain a flexible and progressive approach to orientation, these sections are not clearly differentiated until pupils enter the 1st class. The number of hours per subject varies according to the section.

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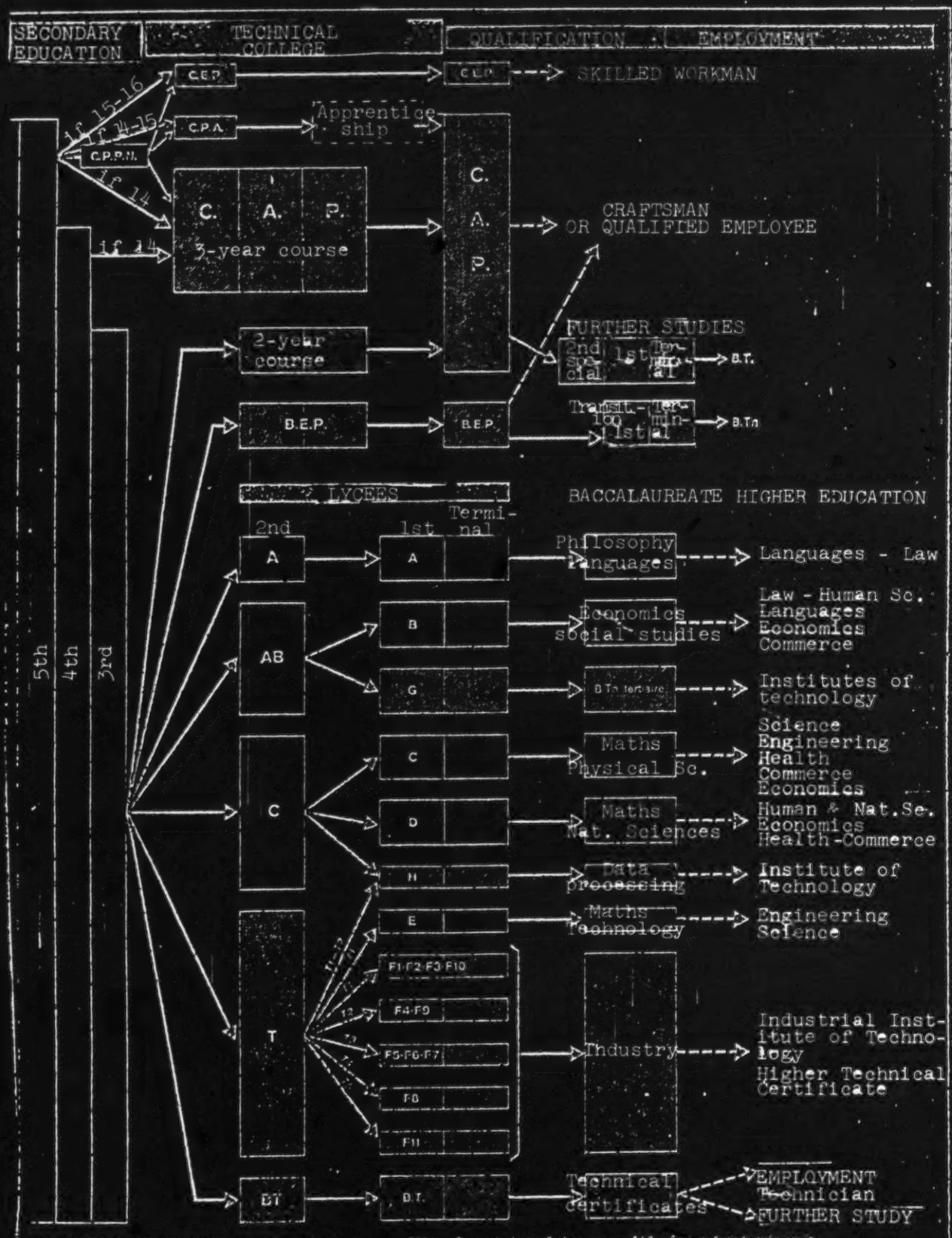
"LE MONDE DE L'EDUCATION" (p. 10-11 ; FEBRUARY 1976)



SOURCE: "ENSEIGNEMENT ET DE LA FORMATION" (Edition 1976)

Year 1975-1976

NO. OF PUPILS IN EACH CATEGORY OF ESTABLISHMENT

(prov. figures)

TYPE OF ESTABLISHMENT	PUBLIC	PRIVATE	TOTAL	CHANGE 1975/1976 1974/1975 (thousand)
PRIMARY				
Nursery (1)	1,848,397	30,666	1,879.063	+ 58.7
Primary (1)	4,356,472	969,164	5,325.636	- 64.9
Special	119,935	6,880	126,815	
	other		128,148	
SECONDARY				
General lower schools ..	364,672			
Private complementary courses		197,832	562,504	- 41.3
Lower secondary schools	1,963,058		1,963,058	+ 91.3
Technical colleges	565,232			
Private technical (CET Level)		169,691	734,923	+ 32.3
Lycées (Classical, (Mod. & Tech.)	1,069,145			
Private secondary		544,525	1,680,413	+ 1.2
Private technical (Lycée level)		66,743		
Special education	84,711		84,711	+10.0
	10,371,622	1,985,501	12,357,123	
OVERALL TOTAL	other		128,148	
			12,485,271	

(1) not including special education

Year 1975-1976

NO. OF PUPILS AT EACH LEVEL OF EDUCATION

(prov. figures)

LEVEL OF EDUCATION	PUBLIC	PRIVATE	TOTAL	CHANGE 1975/1976 1974/1975 (thousand)
PRE-SCHOOL	2,239,787	351,355	2,591,142	+ 50.7
PRIMARY				
CP	873,328	129,379	1,002,707	
CE1	775,773	119,256	895,029	
CE2	766,468	122,886	889,354	
CM1	776,665	131,456	908,121	
CM2	761,931	144,408	906,339	
TOTAL	3,954,165	647,385	4,601,550	- 55.9
Terminal	2,072	1,001	3,073	- 4.6
Initiation	8,845	89	8,934	+ 0.4
TOTAL Primary	3,965,082	648,475	4,613,557	- 60.1
SECONDARY				
1st Cycle	2,428,740	560,612	2,989,352	+ 24.4
New classes	160,432	12,749	173,181	+ 15.6
2nd Cycle - short	576,941	168,681	745,622	+ 32.4
- long	735,212	225,610	960,822	+ 16.8
TOTAL Secondary ...	3,901,325	967,652	4,868,977	+ 89.2
UPPER				
Misc. Preparatory	1,194	1,490	2,684	+ 0.4
Prep. for higher education	29,712	1,642	31,354	- 1.1
Higher Tech.	29,876	8,007	37,883	- 1.9
TOTAL Upper	60,782	11,139	71,921	- 2.6
SPECIAL EDUCATION				
Nursery, primary and special	other 119,935	6,880	128,148 126,815	
Special Education Sections	84,711		84,711	+ 11.0
TOTAL SPEC. EDUC. .			339.674	
OVERALL TOTAL	10,371,622 other	1,985,501	12,357,123 128,148	
			12,485,271	

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Section 2: The system of tertiary education (1)

2.1 Types of course

The system is divided into two-year cycles, which are more or less clear-cut depending on the type of study.

In the institutes ("écoles"), studies are on a full-time basis and in the universities on a part-time basis. The universities make special arrangements for students who are in employment. The number of such students - and hence of special arrangements - is tending to increase.

In the universities (2), the division into cycles is planned as follows:

2.1.1 First cycle

The main orientation of the studies is indicated in the certificate issued.

The alternatives are:

- law,
- economics,
- economic and social administration,
- languages, literature and art,
- human sciences,
- natural science,
- applied mathematics and social sciences,
- theology,
- science and technology of physical activities and sport.

Thus, in the absence of any imposed orientation at university entrance, the first cycle takes the form of a general scientific and technical training cycle, an orientation cycle leading to various types of training and to short or long courses.

2.1.2 Second cycle

In the past, scientific and literary studies were too much orientated (though not in any systematic way) towards the teaching profession. This must remain a basic concern of the universities, but quantitatively the opportunities available in the profession are inadequate to the number of students.

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(1) See table page 10 : "The system of tertiary education".

(2) In the institutes ("écoles") the division into cycles is as follows: preparatory classes, main course, application.

It is therefore intended that qualifications should take account of local and national employment opportunities. Thus the technical study groups that advise on the award of qualifications are constituted in function of the country's "main sectors of economic, social and cultural activity". They are made up for the most part of university teaching staff, but at least one third must be representatives of the above activities. What is desired is a parallel redeployment of university courses, with closer links between university heads and economic and social leaders.

2.1.3 Third cycle

Since the reform of third-cycle studies in 1974, two main ideas have governed the organisation of research-oriented courses: specialisation and "training for and through research".

Alongside training for and through research, a new type of certificate has been instituted, the DESS, which is a highly specialised one aimed at providing more direct access to employment for students completing their master's degrees.

The course lasts only one year and includes tuition as well as a period of on-the-job training.

2.2 Types of institution

As may have been apparent from the foregoing, the French system of tertiary education is marked by a deep split between the national institutes ("grandes écoles") and the universities.

The division is based purely on historical reasons. French universities have operated satisfactorily at certain periods of their history (for instance, in the 13th century and at the beginning of the 20th). But reforms have in general originated outside them. Thus, whenever their permanent defects became too glaring the central government, probably seeking the easiest way out, set up new institutions better adapted to current requirements (or to its own requirements). In this way were founded the Collège de France in the 16th century, the engineering institutes (such as the Ecole Polytechnique) at the beginning of the 19th century, the Ecole Nationale d'Administration in 1945 and others, after which the universities tried to emulate the model thus indirectly offered to them (by founding the Ecoles Nationales Supérieures d'Ingénieurs, or ENSI, within the university system or, in 1972, the Université Technologique at Compiègne). With time the process has speeded up and became more rigidly established, giving rise to two distinct types of institution.

The main differences are as follows:

- The national institutes ("grandes écoles") are attached to various ministries: for example, the Ecole Polytechnique is a military college under the authority of the Ministry of Defence and the Ecole Nationale d'Administration is under that of the Prime Minister.

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- The institutes operate a very strict scheme of restricted entry. There is no "numerus clausus" for the universities.

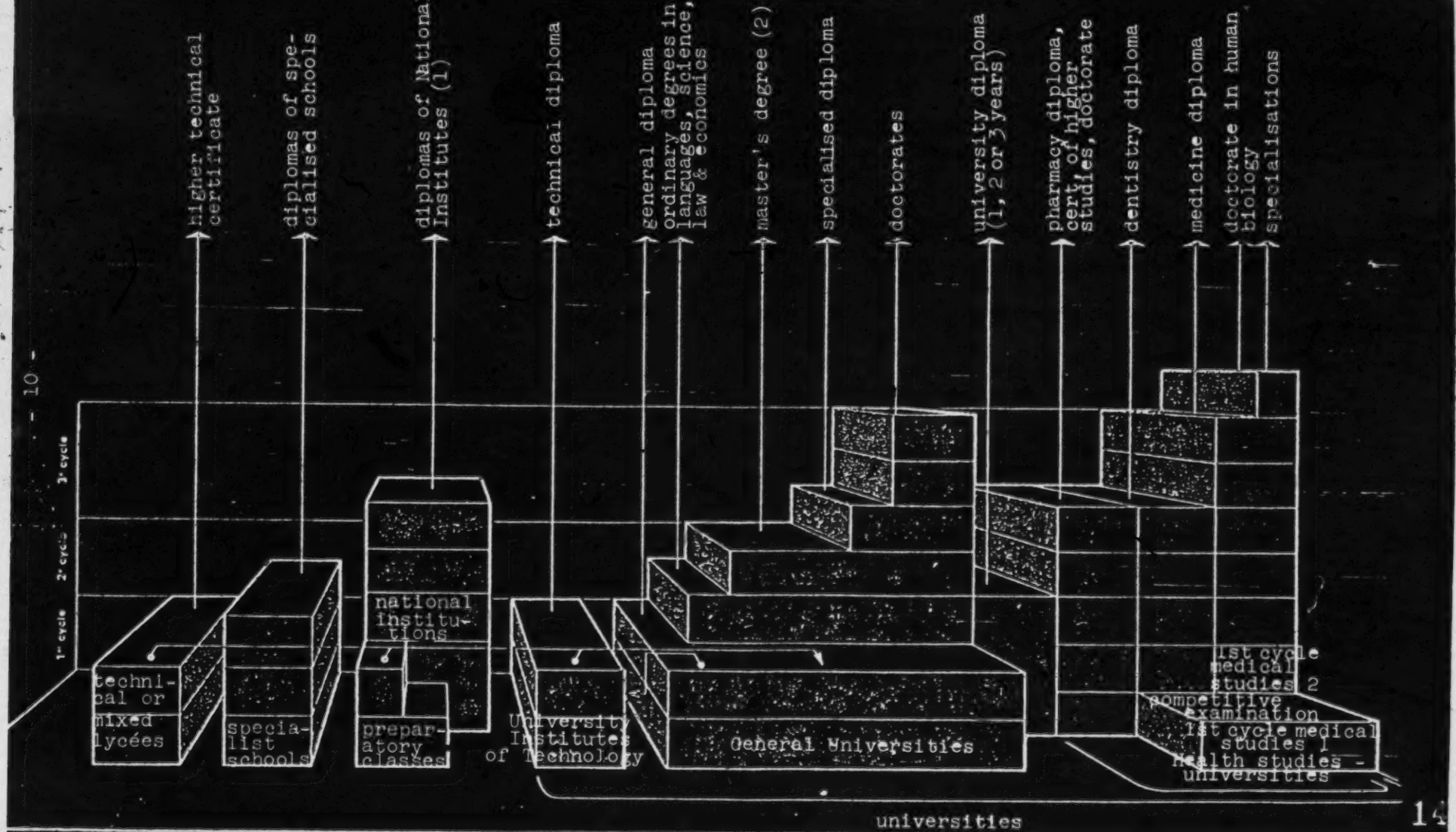
- The institutes have no permanent teaching staff. They employ contracted staff, who are either university teachers or people drawn from other professions. The universities, on the other hand, employ permanent independent staff. This difference, however, is tending to disappear.

- Student costs seem to be distinctly higher in the Institutes.

- Traditionally, the institutes have been establishments for teaching alone, whereas the universities have always maintained a "vocation for research". This difference is also tending to disappear.

- Sociologically speaking, the institutes have until very recently trained engineers, while the universities have produced members of the liberal professions (doctors, lawyers and teachers). For 30 years, the institutes have nurtured the governing élite, while the universities have tended to become the seed-bed of middle management.

THE SYSTEM OF TERTIARY EDUCATION



Source: Document ONISEP 1976-77.

(1) engineering, higher commercial studies, misc.

(2) languages & literature, science, science & technology, management, econ. & soc. admin., applied foreign languages, social sciences, data processing for management, law & economics.

Chapter II: Students

Section 2.1: Rules for admission

Different rules apply to the universities and to the rest of the system.

- Any holder of the "baccalauréat" may enter a university. The "baccalauréat" is officially the first grade of higher education, though in practice it is tending to become the final secondary examination. At the moment it is neither quite one nor the other (1).

All forms of the "baccalauréat", including the technical one, provide the same entitlement to pursue higher studies.

There are also some extra admission rules as well as some exceptions. Certain universities may make entry to certain studies (mainly in the medical field) conditional on their own standards of learning. Others, on the other hand, (eg the University of Vincennes in Paris) take on candidates without the "baccalauréat".

- Entrance to establishments other than universities in the strict sense is subject to further conditions, either a competitive examination with restricted entry or admission on the students' record.

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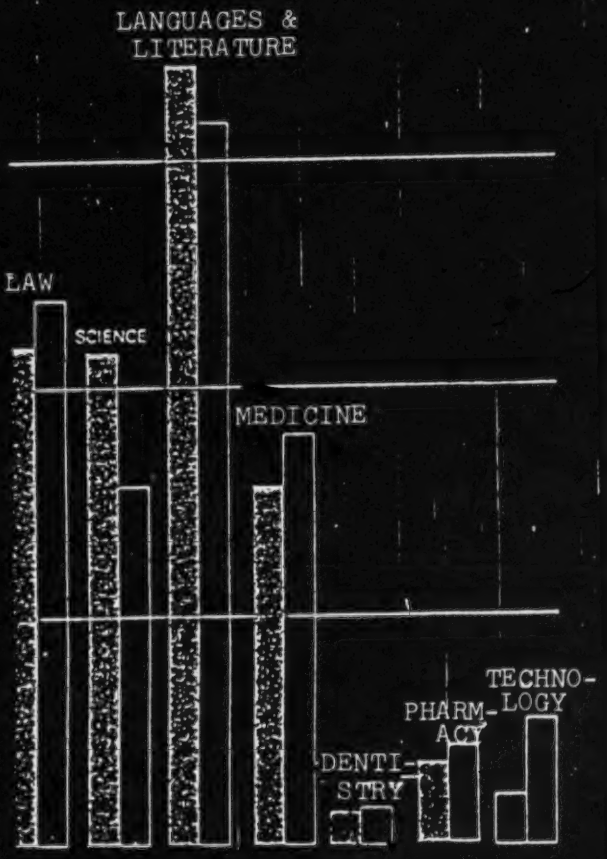
(1) In 1977 there were some 225,000 candidates. Of these, 152,800 were successful, ie an overall pass-rate of about 67.8%.

Section 2.2: Numbers

2.2.1 In universities

II. DISTRIBUTION OF UNIVERSITY STUDENTS
(according to subjects)

Changes between 1968-1969 & 1974-1975



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XII. DISTRIBUTION OF UNIVERSITY STUDENT
(according to subjects)

Changes between 1968-1969 & 1974-1975

Subjects	1968 entry		1974 entry	
	Numbers	%	Numbers	%
Law	126 696	21,0	178 215	23,9
Science	127 347	21,1	117 388	15,7
Languages	196 144	34,0	233 954	31,3
Medicine	98 421	15,7	132 629	17,8
Dentistry	8 007	1,4	10 902	1,5
Pharmacy	20 517	3,5	31 529	4,2
Technology	11 930	2,1	41 869	5,6
Total (1)	577 062	100,0	746 507	100,0

(1) Not included in 1974 =

ENSI et INP	5 720
UER EPS	3 511
general diploma (DEUG)	14 083

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2.2.2 In national institutes

A. under the State Secretariat and not universities:

PUBLIC ENGINEERING COLLEGES UNDER STATE SECRETARIAT

YEAR 1975-1976

No. of Students

INSTITUTES	TOTAL				TOTAL
	FRENCH		FOREIGN		
	M	F	M	F	
AIX-MARSEILLE E.N.S.A.M.	317	5	10	.	332
BESANCON E.N. D'INGENIEURS DE BELFORT	310	2	11	.	323
BORDEAUX E.N.S.A.M.	331	8	4	.	343
DIJON E.N.S.A.M.	340	3	4	.	347
LILLE E.N.S.A.M. E.N.S. DES ARTS ET INDUSTRIES TEXTILES INSTITUT INDUSTRIEL DU NORD	291 99 402	4 3 24	6 24 11	. 4 2	301 130 439
LYON E. CENTRALE I.N.S.A. E.N. D'INGENIEURS DE St ETIENNE	476 2 434 234	32 515 2	12 145 2	. 12 1	522 3 075 239
NANCY-METZ E.N. D'INGENIEURS DE METZ	424	2	7	.	433
NANTES E.N.S.A.M.	330	6	6	.	342
PARIS C.N.A.M. { INSTITUT FRANCAIS DU FROID INDUSTRIEL { E.S. DES GEOMETRES ET TOPOGRAPHES E.N.S.A.M.	13 63 557	. 6 4	6 1 19	. . .	19 70 580
CRETEIL I.S. DES MATERIAUX ET DE LA CONSTRUCTION MECANIQUE CENTRE D'ETUDES SUPERIEURES DES TECHNIQUES INDUSTR.	29 96	. .	21 4	. .	50 100
VERSAILLES ECOLE CENTRALE DES ARTS ET MANUFACTURES E.N.S. DE L'ELECTRONIQUE ET DE SES APPLICATIONS (CLICHY) E.N.S. DE CERAMIQUE INDUSTRIELLE (SEVRES)	853 138 88	59 19 3	71 8 2	. . .	983 165 93
REIMS E.N.S.A.M. (CHALONS MARNE)	335	3	5	.	343
RENNES I.N.S.A. E.N.I. BREST	476 198	98 .	23 2	1 .	598 200
ROUEN I.N.S. CHIMIE INDUSTRIELLE	229	38	4	.	271
STRASBOURG E.N.S. DES ARTS ET INDUSTRIES	619	18	14	.	651
TOULOUSE I.N.S.A. E.N. D'INGENIEURS DE TARBES	680 290	150 2	52 2	8 .	890 294
	10622	1007	478	30	12137

PUBLIC ENGINEERING COLLEGES - OTHER MINISTRIES

- Ecole de l'air	Aix-Marseille	245
- Ecole nationale d'ingénieurs des travaux agricoles	Bordeaux	146
- Ecole nationale supérieure des sciences agronomiques appliquées	Dijon	59
- Ecole nationale d'ingénieurs des travaux agricoles	Dijon	150
- Institut national de promotion supérieure agricole	Dijon	31
- Ecole nationale des techniques industrielles et des mines de Douai	Lille	207
- Ecole nationale supérieure des industries agricoles et alimentaires	Lille	28
- Ecole nationale des travaux publics de l'Etat	Lyon	509
- Ecole nationale supérieure des mines de St Etienne	Lyon	207
- Ecole Nationale supérieure agronomique	Montpellier	262
- Ecole nationale des techniques industrielles et des mines d'Alès	Montpellier	221
- Ecole nationale d'ingénieurs des techniques des industries agricoles et alimentaires	Nîmes	66
- Ecole Nationale des ingénieurs des travaux des eaux et forêts	Orléans-Tours	73
- Ecole nationale supérieure des télécommunications	Paris	350
- Ecole polytechnique	Paris	871
- Ecole nationale supérieure des mines de Paris	Paris	245
- Ecole nationale supérieure des Ponts-et-Chaussées	Paris	481
- Institut national agronomique Paris-Grignon	Paris	527
- Ecole nationale du génie rural, des eaux et forêts	Paris	96
- Institut d'études supérieures d'industries et d'économie laitières	Paris	16
- Ecole nationale supérieure de la météorologie	Paris	130
- Cours supérieurs d'armement	Paris	14
- Cours supérieurs d'engins missiles	Paris	7
- Ecole supérieure de physique et chimie industrielles de la ville de Paris	Paris	165
- Ecole nationale supérieure de techniques avancées	Paris	253
- Ecole technique supérieure des travaux maritimes	Paris	8
- Ecole des ingénieurs de la ville de Paris	Paris	59
- Centre national d'études d'agronomie tropicale	Créteil	31
- Ecole nationale des sciences géographiques	Créteil	64
- Ecole supérieure de l'armement terrestre	Créteil	14
- Ecole nationale supérieure des industries agricoles et alimentaires	Versailles	126
- Ecole nationale du pétrole et des moteurs	Versailles	162
- Ecole nationale supérieure d'horticulture	Versailles	52
- Ecole supérieure du génie militaire	Versailles	59
- Institut national des sciences et techniques nucléaires	Versailles	267
- Ecole nationale supérieure Maritime d'agronomie	Rennes	145
- Ecole nationale supérieure agronomique de Rennes	Rennes	247
- Ecole nationale supérieure des ingénieurs des études techniques d'armement	Rennes	151
- Ecole militaire interarmes	Rennes	178
- Ecole spéciale militaire de St Cyr	Rennes	432
- Ecole navale	Rennes	119
- Ecole supérieure de l'électronique de l'armée de terre	Rennes	38
- Ecole nationale des ingénieurs des travaux ruraux et des techniques sanitaires	Strasbourg	120
- Ecole nationale supérieure de l'aéronautique et de l'espace	Toulouse	359
- Ecole nationale d'ingénieurs de constructions aéronautiques	Toulouse	124
- Ecole nationale de l'aviation civile	Toulouse	550
TOTAL		8 666

PUBLIC ENGINEERING COLLEGES - OTHER MINISTRIES

- Institut supérieur du béton armé	Marseille	38
- Ecole supérieure d'ingénieurs	Marseille	204
- Ecole supérieure de chimie	Marseille	112
- Ecole d'électricité industrielle de Paris	Beauvais	259
- Institut supérieur agricole	Beauvais	301
- Institut supérieur d'agriculture	Lille	249
- Ecole d'ingénieurs ICAM	Lille	155
- Institut supérieur d'électronique Nord	Lille	421
- Ecole hautes études industrielles	Lille	453
- Institut technique roubaisien	Roubaix	119
- Ecole supérieure chimie industrielle Lyon	Villeurbanne	130
- Institut de chimie et physique industrielles	Lyon	151
- Ecole française de tannerie	Lyon	95
- Ecole catholique des Arts et Métiers	Lyon	231
- Institut supérieur d'agriculture de Rhône-Alpes	Lyon	213
- Ecole supérieure de filature et tissage Ent	Epinal	58
- Ecole supérieure d'électronique Ouest	Nantes	403
- Ecole supérieure d'agriculture	Angers	218
- Ecole supérieure d'industries textiles	Mulhouse	67
- Ecole supérieure d'agriculture Purpan	Toulouse	327
- Ecole supérieure d'optique	Orsay	77
- Institut textile France	Boulogne Billancourt	5
- Ecole supérieure d'électricité	Gif Yvette	772
- Ecole supérieure de fonderie	Bagneux	27
- Ecole polytechnique féminine	Sceaux	532
- Ecole d'enseignement technique d'ingénieurs	Montrouge	20
- Ecole spéciale de mécanique et d'électricité	Paris	1 262
- Ecole française de radioélectricité, électronique et informatique	Paris	262
- Institut supérieur électronique	Paris	111
- Ecole supérieure d'ingénieurs en électrotechnique et électronique	Paris	143
- Ecole supérieure d'industrie du vêtement	Paris	17
- Ecole supérieure de chimie organique et minérale	Paris	242
- Ecole technique supérieure de laboratoire	Paris	13
- Ecole supérieure appliquée de corps gras	Paris	8
- Ecole visitet	Paris	754
- Ecole spéciale de travaux publics, bâtiment ind.	Paris	1 099
- Ecole supérieure de soudure autogène	Paris	55
- Ecole supérieure du bois	Paris	115
- Ecole supérieure d'agriculture	Paris	300
TOTAL		10 944

2.2.3 In establishments of higher technical education

NUMBERS OF STUDENTS IN HIGHER TECHNICAL SECTIONS

ACADEMIES	PUBLIC ESTABLISHMENTS - EDUCATION		PUBLIC ESTABLISHMENTS - FARMING		PRIVATE ESTABLISHMENTS		ALL ESTABLISHMENTS	
	No. of students	women	No. of students	women	No. of students	women	No. of students	women
AIX-MARSEILLE	1 322	630	125	10	1 497	1 178	2 944	1 818
dont Réunion	(145)	(84)	-	-	-	-	(145)	(84)
AMIENS	771	337	-	-	-	-	771	337
ANTILLES-Guyane	180	93	-	-	-	-	180	93
BESANCON	747	300	63	7	36	33	846	340
BORDEAUX	1 438	774	180	17	591	405	2 209	1 196
CAEN	428	164	56	-	84	69	568	233
CLERMONT	830	453	202	23	137	137	1 169	613
CORSE	95	72	-	-	-	-	95	72
CRETEIL	1 705	818	30	-	143	-	1 878	818
DIJON	787	348	56	6	255	242	1 098	596
GRENOBLE	1 283	598	53	9	652	472	1 988	1 079
LILLE	2 827	1 140	63	3	875	379	3 765	1 522
LIMOGES	353	143	113	20	154	154	620	317
LYON	1 530	1 027	113	8	1 727	914	3 370	1 949
MONTPELLIER	757	417	61	5	567	322	1 385	744
NANCY-METZ	1 134	522	107	8	76	44	1 317	574
NANTES	898	463	61	11	789	602	1 748	1 076
NICE	808	474	62	6	372	316	1 242	796
ORLEANS-TOURS	946	512	155	2	125	125	1 226	639
PARIS	4 942	2 900	-	-	4 997	3 188	9 939	6 088
POITIERS	476	267	49	3	38	38	563	308
REIMS	898	418	-	-	51	51	949	469
RENNES	1 021	515	57	4	293	293	1 371	812
ROUEN	703	347	-	-	158	158	861	505
STRASBOURG	1 611	804	-	-	230	230	1 841	1 034
TOULOUSE	1 507	844	166	51	693	678	2 366	1 573
VERSAILLES	1 726	658	126	20	516	398	2 368	1 086
TOTAL FRANCE & overseas depts.	31 723	16 038	1 898	223	15 056	10 426	48 677	26 687
Metropolitan France	31 398	15 861	1 898	223	15 056	10 426	48 352	26 510

Section 2.3: Financial assistance to students

The rule in higher education in France is free studies backed up by fairly extensive social aid involving the whole university welfare system, which depends on a special network of public institutions, the national and regional welfare centres for schools and universities.

Any student under 26 years of age is entitled to the benefit of the university welfare system, the main features of which are:

- use of university canteens;
- accommodation in university residences.

University canteens are open to almost all students under 26, who are provided with meals at a nominal cost (of the order of 2.50 FF). Accommodation in university residences depends on availability and a means test.

Education is in principle provided free of charge, although every student pays a university enrolment fee of about 250 FF. Students are not, however, usually provided with study material free of charge, even where the cost is minimal (eg roneoed lecture notes etc).

Students in employment, particularly those in the civil service, are normally exempted from all or part of the enrolment fees and in addition qualify for a number of extra social benefits. In particular, if their income is below a certain level they are entitled to the standard benefits of students not in employment.

The table below shows the distribution of grants among the various subjects:

- Law, economics, political science ..... 9.8 %
- Languages and literature ..... 9.0 %
- Science and engineering ..... 10.9 %
- Medicine ..... 9.1 %
- Pharmacy ..... 8.6 %
- Dentistry ..... 13.3 %
- Institutes of technology ..... 32.9 %

As from 1 October 1977, higher education grants were as follows:

1st level	3,708 F
2nd level	4,284 F
3rd level	4,842 F
4th level	5,418 F
5th level	5,994 F
6th level	6,570 F
7th level and 1st year of 3rd cycle	7,146 F
Higher teacher training grants	7,722 F

Students resuming their studies in the university year 1977-1978 after completing their national service will be eligible for the following grants:

1st level	5,562 F
2nd level	6,255 F
3rd level	6,921 F
4th level	7,623 F
5th level	8,316 F
6th level	9,009 F
7th level and 1st year of 3rd cycle	9,702 F
Higher teacher training grants	10,395 F

FRANCE (incl. overseas departments)

PUBLIC

1973 - 1974 to 1976 - 1977

Section 2.4

CHANGES IN THE NUMBER OF UNIVERSITY STUDENTS, ACCORDING TO SEX AND SUBJECT

ACADEMIC YEARS	SUBJECTS									TOTAL
	LAW	ECONOMICS	SCIENCE (incl. engineering)	LANGUAGES (incl. orient lang.)	MEDICINE	DENTISTRY	PHARMACY	GENERAL DIPLOMA	INSTITUTES OF TECHNOLOGY	
1973-74 Total	118,044	53,060	123,703	243,059	133,463	10,771	28,032	1,551	39,280	750,963
1973-74 % of women students	42%	28%	34%	66%	37%	28%	59%	50%	30%	47%
1974-75 Total	124,593	56,786	123,576	241,809	136,010	10,902	31,599	4,843	41,949	772,067
1974-75 % of women students	43.8%	29.9%	34%	66.1%	37.9%	29.4%	59.5%	49.8%	30.2%	47%
1975-76 Total	129,485	57,353	127,406	252,636	148,559	11,258	33,510	7,525	43,526	811,258
1975-76 % of women students	45.7%	30.6%	34%	65.3%	39.1%	30.8%	60%	49.5%	31.2%	47.6%
1976-77 Total	130,373	55,607	128,856	253,447	153,963	12,206	33,474	9,422	44,243	821,591
1976-77 % of women students	46.2%	31.1%	33.8%	65.3%	40.1%	31.7%	60.2%	46.6%	32%	47.8%

FRANCE

PUBLIC

Section 2.5

1964 - 1965 to 1976 - 1977

CHANGES IN THE NUMBERS OF FRENCH STUDENTS ACCORDING TO THE SOCIAL BACKGROUND AND OCCUPATION OF THEIR PARENTS (1)

SOCIAL BACKGROUND AND OCCUPATION OF PARENTS	1964-1965		1970-1971		1975-1976		1976-1977	
	No.	%	No.	%	No.	%	No.	%
Farmers	17,531	5.5%	30,484	7.2	36,480	5.1	36,696	5.1
Farm-workers	2,210	0.7	3,524	0.8	3,062	0.4	2,950	0.4
Employers	48,625	15.2	56,852	13.3	73,734	10.4	74,623	10.4
Liberal professions and upper management	96,618	30.2	125,587	29.9	215,636	30.3	223,998	31.4
Middle management	56,599	17.7	67,356	16.1	110,147	15.5	114,054	16.0
Clerks	26,254	8.2	39,067	9.3	60,412	8.5	62,288	8.7
Workers	26,595	8.3	55,641	13.3	80,435	11.3	83,796	11.7
Domestic staff	3,902	1.2	3,274	0.8	5,605	0.8	6,036	0.8
Miscellaneous (2)	20,789	6.5	12,088	2.9	44,718	6.3	44,995	6.3
No occupation - independent means	19,018	6.0	4,465	1.1	17,992	2.5	18,029	2.5
Indeterminate	1,480	0.5	22,250	5.3	62,974	8.9	47,546	6.7
TOTAL	319,621	100.0	420,588 (3)	100.0	711,195	100.0	715,011	100.0

(1) INSEE standard categories - From 1970-71, including institutes of technology (IUT)

(2) Owing to differences of interpretation, this rather mixed category can give rise to some distortion in the annual distribution

(3) For 1970-71, there are practically no figures on Paris students.

NB The totals on the table correspond to the number of replies received.

FRANCE AND OVER-SEAS DEPARTMENTS

PUBLIC

Section 2.6

CHANGES IN THE NUMBER OF STUDENTS REGISTERED (1) IN THE UNIVERSITIES ACCORDING TO SUBJECT AND STUDY CYCLE

1964 - 1965 to 1976 - 1977

SUBJECTS AND STUDY CYCLES (2)		1964 - 1965	1975 - 1976	1976 - 1977
Law and Sciences	1st cycle	30,301	88,462	88,248
	2nd cycle	8,618	34,777	37,490
Economics	3rd cycle	5,595	24,486	23,049
	TOTAL	44,514	147,725	148,787
Science	1st cycle	34,708	45,457	46,705
	2nd cycle	47,872	39,944	38,898
	3rd cycle	12,534	35,000	25,250
	TOTAL	95,114	110,401	110,853
Languages and Literature	1st cycle	41,822	123,431	125,641
	2nd cycle	56,460	77,723	74,918
	3rd cycle	7,806	18,065	19,882
	TOTAL	106,088	219,219	220,441
Medicine and Dentistry	1st cycle	14,059	48,840	54,113
	2nd cycle	32,093	66,067	67,747
	3rd cycle	8,443	31,928	34,600
	TOTAL	54,595	146,835	156,460
Pharmacy	1st cycle	3,218	12,439	10,936
	2nd cycle	7,720	16,733	18,221
	3rd cycle	1,455	4,128	4,148
	TOTAL	12,383	33,300	33,305
Institutes of Technology	(1st cycle)	-	43,526	44,243
All Subjects	1st cycle	124,108	362,155	369,886
	2nd cycle	152,763	235,244	237,274
	3rd cycle	35,823	103,607	106,929
	TOTAL	312,694	701,006	714,089

(1) Students undergoing normal preparation for 1st, 2nd or 3rd cycle diplomas

(2) Does not include: intermediate law students, students in institutes attached to the universities, French and foreign trainees and non-registered students attending lectures.

Section 2.7 - RATIO BETWEEN UNIVERSITY POPULATION (ALL SUBJECTS) AND TOTAL POPULATION IN 19-23 AGE BRACKET

DISTRICT	19-23 age group (1)	University students (all subjects) (2)	% of university students
METROPOLITAN FRANCE	4,199,540	816,281	19.5%
OVERSEAS DEPARTMENTS (Antilles and and Réunion)	-	5,310	-

(1) Population aged 18 to 22 in 1975 census (INSEE) (DGI tables - sample 1/5, RP 75 - INSEE).

(2) Beginning of year survey, figures applying on 15 December 1976.

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Section 2.8

TOTAL NUMBER OF STUDENTS IN POST-SECONDARY EDUCATION (1975-76)

	Public sector	Private sector	TOTAL
UNIVERSITIES			
Law & Political Science	129,485	927	130,412
Economics	57,353	604	57,957
Languages & Literature	252,636	4,174	256,810
Science	121,510	433	121,943
Medicine & Dentistry	159,817	792	160,609
Pharmacy	33,510	-	33,510
Mixed studies	7,525	78	7,603
Religious studies	-	3,097	3,097
TOTAL UNIVERSITIES (76.2%)	761,836	10,105	771,941
INSTITUTES			
Preparatory courses	32,104	3,208	35,312
Engineering	26,693	10,944	37,637
Commerce	-	10,929	10,929
Law	6,862	-	6,862
Architecture	14,209	-	14,209
Higher Teacher Training	2,926	-	2,926
TOTAL INSTITUTES (10.5%)	82,794	28,081	107,875
SHORT TECHNICAL COURSES			
Higher technical sections	31,826	14,390	46,216
Institutes of technology	43,526	-	43,526
TOTAL SHORT TECHNICAL (8.7%)	75,352	14,390	89,742
TEACHER TRAINING			
Teacher training colleges	24,605	-	24,605
Physical education instruction	1,182	-	1,182
TOTAL TEACHING (2.5%)	25,787	-	25,787
OTHER ESTABLISHMENTS (2.1%)			
Literary, artistic, technical, paramedical	2,250	18,571	21,001
TOTAL NUMBER OF STUDENTS	948,019	68,327	1,016,346

Section 2.9

FRANCE

PUBLIC - PRIVATE

COMPARISON OF STUDENTS LEAVING HIGHER EDUCATION

1974 and 1975

Level	1974		1975	
	No.	% of total	No.	% of total
TOTAL LEAVERS	191,600	100.0	181,500	100.0
TOTAL UNIVERSITY LEAVERS	128,800	67.2	114,500	63.1
TOTAL NON-UNIVERSITY LEAVERS	62,800	32.8	67,000	36.9
TOTAL LEVELS I AND II	74,200	38.7	74,200	40.9
Engineering	9,500	5.0	9,600	5.3
Other institutes	7,300	3.8	11,200	6.2
Law, economics, languages, sciences	42,500	22.1	38,900	21.4
Medicine, dentistry, pharmacy	14,900	7.8	14,500	8.0
TOTAL LEVEL III	57,900	30.2	58,200	32.1
BTS (Higher technical)	9,500	5.0	10,800	5.9
DUT (University technical)	13,300	6.9	14,800	8.1
Teacher training	7,100	3.7	7,000	3.9
DEUG (General diploma) or Bac. + 2	5,000	2.6	5,000	2.8
University paramedical training	900	0.5	1,200	0.7
Nursing	9,200	4.8	19,400	10.7
Other health	12,900	6.7		
TOTAL LEVEL IV	59,500	31.1	49,100	27.0
Drop-outs - technical courses	7,300	3.8	9,000	5.0
Drop-outs - IUT courses	6,700	3.5	4,500	2.5
University drop-outs (excl. IUT)	45,500	23.8	35,600	19.5
Other	-	-	-	-

Section 2.10 FORECASTS FOR UNIVERSITIES

1977-78: approximately 840,000

1978-79: approximately 850,000

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Chapter III: Research

In 1975, the cost of research and development activities in France was 25,500 million FF. Between 1966 and 1975, their real annual growth rate was 2.5%. The percentage of GNP devoted to research and development was 1.15% in 1959, 2.15% in 1967 and 1.76% in 1975.

Out of the total of 25,500 million FF, 60% (15,500 million) was spent by the public sector and the remainder (10,000 million) by the private sector and non-profit-making institutes.

Out of the public sector's total of 15,500 million, 2/3 (11,000 million in 1977) is subject to interministerial control by the Scientific and Technical Research Delegation and constitute the official research budget. Public funds for research in the fields of national defence, civil aeronautics and telecommunications, and a proportion of the university research grants lie outside this.

University research is carried out under the control of the State Secretariat for the Universities by 76 universities or EPSC and some 40 major institutions (the Collège de France, Ecole des Ponts et Chaussées, Institut Pasteur, EPHE, CNRS, INRA, INSERME, CNEXO, CNES and CEA, all research institutes established outside the system of higher education but benefiting from the assistance of university staff).

Higher education and research are in principle closely linked. In particular, all teachers are required to devote a fair part of their work to research. However, the relationship between research and higher education in France has never been satisfactory. There is even a feeling that it has been deteriorating over the last 10 years.

In fact, the more active university staff carry on their research outside the universities, in the many public institutions mentioned above; the others spend most of their time on teaching of administrative duties.

Chapter IV: The cost of tertiary education

In view of the extreme fragmentation of the system, it is impossible to give any overall budget for tertiary education in France. But the most significant figures are listed below for the sector governed by the State Secretariat for the Universities, which is known to represent quantitatively the greater part of tertiary education.

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SOURCE, AMOUNT AND GROWTH OF INTERNAL RESOURCES OF UNIVERSITIES IN 1975 AND 1976

TYPE OF INTERNAL RESOURCES	1975 BUDGET	1976 BUDGET
Public authorities	15,052,000 (1)	21,721,000
University dues	67,976,000	73,886,000
Other resources: (Subsidiary income (Financial income (Extraordinary receipts	244,672,000	377,720,000 (2)
TOTAL	327,700,000	473,327,000
Total budget	1,347,605,000	1,705,097,000
Internal resources as percentage of total budget	24.31	27.75

(1) In the 1975 financial accounts, the amount received was 19,198,000.

(2) This includes 44,500,000 from the running of services not included under this head in 1975.

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Changes over the last 5 years, in current francs and constant value, in the state budget (net expenditure in the general budget), the budget of the State Secretariat for the Universities and the Gross Domestic Product

- Initial Finance Act -

(million francs)

		1973	1974	1975	1976	1977	1978
General budget							
(Initial Finance Act)	(1)	195.359	219.971	259.254	293.172	334.843	396.226
	(2)	-	197.283	206.084	212.751	- (3)	- (3)
	(1)	100	112.6	132.7	150.1		
	(2)	100	101	105.6	109.0		
Budget of State Secretariat for the Universities							
(Initial Finance Act)	(1)	6.444	7.009	7.926	9.108	10.489	11.420
	(2)	-	6.286	6.300	6.609	- (3)	- (3)
	(1)	100	108.7	123.0	141.3		
	(2)	100	97.6	97.7	102.5		
Changes in GDP	(1)	1,114,200	1,271,805	1,437,149	1,657,372		
	(2)	-	1,140,632	1,142,407	1,202,737		
	(1)	100	114.1	128.9	148.7		
	(2)	100	102.4	102.6	103.1		
Changes in number of students		763,355	785,389	823,391	833,136	848,795	864,606
		100	102.9	107.9	109.1	111.2	113.3

(1) Current francs.

(2) Constant value - applying GDP price index deflator.

(3) GDP price index not yet available.

A P P E N D I X I

HIGHER EDUCATION

(million francs)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Running expenditure											
. research (A) (research budget)	168,977	176,283	183,199	196,885	213,034	230,824	248,395	269,225	274,995 (a)	298,343 (b)	327,691 (b)
Running expenditure											
. higher education (B)	2,074,805	2,489,693	3,381,076	3,546,784	3,816,198	4,243,081	4,621,229	5,281,834	6,350,813	7,076,372	7,850,357
- Percentage A/B	8.14	7.80	5.42	5.55	5.58	5.42	5.37	5.09	4.31	4.21	4.17
Programme allocations: research (C)	80,000	32,038	72,000	86,900	91,700	93,000	100,000	104,000	79,150	105,000	102,000
higher education (D)	976,000	708,445	917,750	812,900	776,950	636,750	648,500	565,000	498,650	455,734	401,880
- Percentage C/D	8.19	4.52	7.84	10.68	11.80	14.60	15.40	16.41	15.87	23.03	25.39

a. In 1976, at the request of the DGRST, the staff costs of some of the major establishments mentioned under heading 36 - 15 were excluded from the research budget. This transfer has the effect of reducing the increase in appropriations. This type of alteration in the accounts shows the difficulty of establishing long-term comparisons.

b. With subsidies

The comparison between the research budget and the overall higher education operational budget is not significant since, in the case of research, subsequent to the inclusion of non-established agents as from 1 January 1976 the funds are intended mainly for the purchase of equipment, whilst more than two-thirds of the establishments' overall running expenditure funds other than for research go to staff costs.

A P P E N D I X II

CNRS

(National Scientific Research Centre)

Year	Staff costs	%	Running costs	%	Programme allocations	%	Total
1970	582,139,805.00	61.24	224,373,616.94	23.60	144,100,000.00	15.16	950,613,421.94
1971	640,519,702.00	60.80	232,984,596.05	22.11	180,000,000.00	17.09	1,053,504,298.05
1972	865,100,271.00	61.95	278,844,472.01	19.97	252,300,000.00	18.07	1,396,244,743.01
1973	961,504,576.00	58.80	377,784,635.84	23.10	296,000,000.00	18.10	1,635,289,271.84
1974	1,145,605,203.70	60.06	434,894,443.97	22.80	327,000,000.00	17.14	2,907,499,647.67
1975	1,365,921,666.00	62.31	476,007,703.15	21.72	350,000,000.00	15.97	2,191,929,369.75
1976	1,593,583,887.99	65.26	513.415,947.09	20.97	339,600,000.00	13.87	2,448,607,835.68
1977	1,822,063,523.00	69.06	482,408,868.00	13.28	333;904,000.00	12.65	2,638,376,391.00
1978	2,078,272,186.00	72.16	510,760,950.00	17.49	331,600,000.00	11.35	2,920,633,236.00

- Staff costs and running costs from 1970 to 1976 are budgetary allocations after amendments, not taking account of transfers from section 2 (in the case of running costs); they include appropriations covered by internal resources and - where running costs are concerned - appropriations covered by allocated resources (not taking account of allocated resources carried forward).

- For 1974, the appropriation for running costs has been reduced by the amount for writing down resulting from a budget amendment.

- For 1977 and 1978: 1. The staff appropriations are respectively those of the initial budget and of the budgetary forecasts they include provision for increases in wages and emoluments.

  2. The 1977 and 1978 estimates for running costs have been increased by the amount of the allocated resources included in the 1976 budget, following budget amendments.

- The programme allocations are those of the initial budgets; however, for 1976 they take account of the net transfer of 12.1 MF by budgetary amendment from programme allocations to running costs (programme subsidies). They do not include the programme subsidy which appears with the appropriations for running costs from 1976 onwards.

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Chapter V: Permanent education

Permanent education has existed in France for a long time and has been growing. The years 1970-71 marked a turning point in its development, an interoccupational national agreement having been signed in 1970 between the trade union confederations (CGT, CFDT, FO etc), the National Council of French Employers and the General Confederation of Small and Medium Businesses.

This agreement instituted a "right to training leave", ie the right for a wage-earner to leave his place of work in order to attend a training course, the employer being required to pay his normal wage and bear the cost of the training.

In 1971 this right was extended by law to all workers and, subject to certain conditions, to civil servants as well.

A. Expenditure

	1972	1973	1974
by the state	1.7	2.0	2.3
by the private sector	2.8	3.7	4.9
total	4.5	5.7	7.2

(in thousands of millions of francs)

Thus the state training budget (excluding apprenticeship) increased by nearly 40% from 1972 to 1974, by which time the figure had trebled compared with 1969 (800 million francs).

If the private sector's expenditure is compared with the total wage bill, it will be noted that the contribution rate has steadily increased, from 1.35% in 1972 to 1.49% in 1973 and 1.63% in 1974.

However, there was no increase in 1975: 6.62%.

B. Number of wage-earners affected

The total number of trainees in 1974 shows that 1 employed person in 8 underwent some kind of training.

The number of trainees paid for by the state has noticeably decreased since 1973. This could be explained by greater selectivity on the part of the authorities, who have shown a preference for longer training periods.

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Trainees attending a course or part of a course	1972	1973	1974
paid for by the state	958,000	956,000	888,000
paid for by the private sector	1,049,000	1,492,000	1,770,000
total (1)	1,760,000	2,230,000	2,470,000

Looking beyond the totals and the different types of training, it is worth considering the duration of training courses.

The trend has been towards a slight extension in the duration of courses paid for by the state, but a reduction in those paid for by the private sector.

(This trend is confirmed in 1975, where the average training time paid for by the public sector increases to 58 hours.)

C. Number of hours of paid training

	1972	1973	1974
paid for by the state	182,000,000	180,000,000	185,000,000
paid for by the public sector	78,000,000	103,000,000	110,000,000

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(1) These figures are not simply the total of the two preceding figures, because the costs of a number of trainees (250,000 in 1972, 220,000 in 1973 and 190,000 in 1974) were met jointly by the state and the private sector. This double accounting is excluded from the total.

D. Average duration of courses

	1972	1973	1974
paid for by the state	190 h	190 h	210 h
paid for by the public sector	175 h	67 h	62 h

It is worth noting that, in spite of a slight increase in the totals both as regards expenditure and numbers, the figures are nowhere near the prospects opened up by the agreement and the Act, namely 2% of the work force engaged at any one time on training courses of 160 hours.

A few remarks may however be useful in interpreting the figures.

Firstly, the continuous training schemes are instituted largely on the initiative of the firms themselves, "as one of the surest means of achieving social progress and economic development". Although they are officially entitled to it, wage-earners tend to be more hesitant in requesting personal training leave to follow courses of their own choosing.

The benefits of training tend to go more to engineers and middle management than to workmen and clerks.

The private sector has been quicker to adapt to the new requirements for training than the public sector.

Although the public sector would tend to be preferred by wage-earners and their representatives, it is still not fully alive to its new role. More specifically, the effort contributed by the official educational system (universities etc) amounts to only 4% of the total occupational training paid for by employers.

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Chapter VI: Projects for reform

Within the public tertiary system as a whole, it is the university sub-system which has changed most. This process, brought on by the 1968 crisis, has occurred in three stages.

The first stage, from 1968 to 1971, consisted in the institutional reorganisation of the universities. This reorganisation was based on three key notions: autonomy, multidisciplinarity and participation:

- autonomy, to enable the universities to face up to their responsibilities by depriving them of the excuse of the omnipotence of central government;
- multidisciplinarity, to promote contact between teachers in different disciplines and attenuate sectional divisions;
- participation, to help initiate contact between teachers, their students and the representatives of the country's various economic and social forces.

The second stage consisted in defining new types of course and syllabus, with the general emphasis on short courses more specifically designed for the needs of a particular occupation. In this stage, the central authority merely provided general guidance and left the universities free to innovate, which resulted in a great diversification of higher education and even, it is sometimes suggested, its fragmentation.

Finally, the present stage is a somewhat administrative one in which more thought is being given to the way the available funds should be distributed.

This third stage, which is apparently the most inoffensive of the three, could also be the most effective if it were based on a conscious political strategy. But this does not really seem to be the case.